

CLAIMS:

1. Power converter comprising an inductor for receiving energy from a power supply, and connected to said inductor an output capacitor for providing an output voltage,
5 characterized by
 - an additional current path arranged in parallel to one of said inductor and said capacitor, which additional current path can be opened and closed, wherein said additional current path is formed such that a current flowing through said additional current path reaches basically immediately a desired value, when said
10 additional current path is opened; and
 - feedback means for opening said additional current path, when said output voltage across said output capacitor reaches a predetermined maximum value.
- 15 2. Power converter according to claim 1, wherein said additional current path comprises a controllable current source.
3. Power converter according to claim 1, wherein said additional current path is a low impedance path.
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4. Power converter according to claim 3, wherein said low impedance path comprises a resistor.
5. Power converter according to claim 1, wherein said feedback means open
25 said additional current path for a predetermined time.

6. Power converter according to claim 1, wherein said feedback means close an opened additional current path when a second predetermined output voltage is reached.
- 5 7. Power converter according to claim 1, wherein said feedback means control an opened additional current path based on said output voltage.
8. Power converter according to claim 1, wherein said feedback means
10 control an opened additional current path based on a current through said inductor.
9. Power converter according to claim 1, wherein said power converter is one out of a group of a buck converter, a boost converter and a buck/boost converter.
- 15 10. Method for controlling a power converter, which power converter includes an inductor for receiving energy from a power supply, and connected to said inductor an output capacitor for providing an output voltage, said method comprising opening a controllable additional current path arranged in parallel to one of said inductor and said capacitor, when said output voltage across said output capacitor
20 reaches a predetermined maximum value, such that a respective desired current flows basically immediately through said additional current path.